

**ABSTRACT OF THE DISCLOSURE**

The discrete cosine transform (DCT) is mapped to a graphics processing unit (GPU) instead of a central processing unit (CPU). The DCT can be implemented using a shader-based process or a host-based process. A matrix is applied to a set of pixel samples. The samples are processed in either rows or columns first, and then the processing is performed in the opposite direction. The number of times a shader program is changed is minimized by processing all samples that use a particular shader (e.g., the first shader) at the same time (e.g., in sequence).